## **ABSTRACT**

A hydrocarbon containing formation may be treated using an in situ thermal process. A mixture of hydrocarbons,  $H_2$ , and/or other formation fluids may be produced from the formation. Heat may be applied to the formation to raise a temperature of a portion of the formation to a pyrolysis temperature. Heat may also be applied to the formation to increase a permeability of the formation. The permeability may increase uniformly throughout the treated portion of the formation. The permeability may increase to a relatively high permeability as compared to the initial permeability.